

REMARKS

Claims 1-35 remain in this application. Claims 1 and 2 have been amended. Reconsideration and review of the application is respectfully requested.

Claim 1 has been objected to based on an informality. The Applicant has amended Claim 1 to cure the cited informality. The Examiner has objected to Claim 2 under 35 U.S.C. §112 because of an insufficient antecedent basis for the limitation "said device services" in lines 7-8. Claim 2 has been amended to address this objection.

Before addressing the merits of the rejections based on the prior art, a brief description of the present application is provided. The present invention is directed to a system and method for allowing devices to be remotely accessed over a network. In one exemplary embodiment of the present invention, a device management framework allows driver services to access and control devices attached to the network. The device management framework includes a device manager that is responsible for brokering the devices to allow the driver services to remotely access the devices. The device manager is also responsible for approving driver services, keeping an inventory of devices and their controlling driver services and locating devices on the network. The device manager may check a policy list to compare what the driver service has requested with an administrative policy for permitting device access.

If appropriate, the device manager may also register the driver service with a remote device driver and initiate the transmission of device discovery configuration events to the driver service. The remote device driver keeps track of which device services are associated with the devices attached to the bus device driver and maintains the relationships between the device manager, the requesting services and the actual bus device driver. The device management framework may also include a remote bus proxy to provide an interface between the device manager and the remote device driver.

The Examiner has rejected Claim 1 under 35 U.S.C. §102(e) as being anticipated

by Goshey et al. (U.S. Patent No. 6,101,555). The Examiner has also rejected Claims 2-4, 6-8, 12, 13, 15, 17-21, 25, 28-31 and 35 under 35 U.S.C. §103(a) as being unpatentable over Goshey in view of Kennedy (U.S. Patent No. 5,832,513). The Examiner has further rejected Claims 5, 9-11, 14, 16, 22-24, 26, 27 and 32-34 under 35 U.S.C. §103(a) as being unpatentable over Goshey and Kennedy in view of Edlund et al. (U.S. Patent No. 6,085,227). These rejections are respectfully traversed.

Goshey discloses a method and apparatus for establishing communications to a remote peripheral device over a network. When a Windows application desires to read or send data to a device attached to a remote target computer, the ASPI request will send the request to the requesting computer's WNASPI32.DLL engine. Col. 6, lines 17-21. Once the requesting computer's WNASPI32.DLL engine receives the request from the ASPI request, the WNASPI32.DLL engine will send the request to the requesting computer's ScanLAN DLL. Col. 6, lines 17-21. Once the request is routed to the ScanLAN DLL, that request is sent over the network to the target computer that has access to the desired peripheral device. Col. 6, lines 39-41.

The ASPI request is received by the network and provided to a Server ScanLAN application loaded on the target computer. Col. 6, lines 42-45. Any computer that desires to share its peripheral devices with other networked computers must have the Server ScanLAN application loaded thereon. Col. 6, lines 45-48. The Server ScanLAN application will then provide the request to the target computer's WNASPI32.DLL engine, which in turn passes the request to the target computer host adapter that is attached to the desired device. Col. 6, lines 47-52. The host adapter will communicate the scanned data back to the target computer's WNASPI32.DLL engine to be transferred to the Server ScanLAN application, over the network, to the requesting computer's Scan LAN DLL and WNASPI32.DLL engine, and then back to the Windows application. Col. 6, lines 53-59. But, if the requested device is currently being used, the request is placed in a queue. Col. 6, lines 60-64.

Therefore, unlike the present invention, Goshey does not disclose or suggest that

the WNASPI32.DLL engine approves requests to read or send data to remote devices, controls accessibility to the remote device or is otherwise responsible for brokering devices to requesting computers. The WNASPI32.DLL engine merely facilitates the process of passing on an ASPI request to a target computer and transferring data back to the requesting computer. See Col. 6, line 17-Col. 7, line 5, and Fig. 5C. Accordingly, Goshey does not disclose or suggest that the requesting computer's WNASPI32.DLL engine controls communication between Windows Application and the target computer's WNASPI32.DLL engine.

In contrast, the present invention provides that the device manager controls communication between the device service and the remote device driver. The device manager is responsible for brokering devices that are attached to desktop units (HIDs) on the interconnection fabric for purposes of remotely accessing the devices from various services. Page 12, lines 23-25. The device manager is also responsible for approving of services, keeping an inventory of devices and their controlling services, and locating devices on the interconnect. Page 13, lines 17-19. The device manager controls the service with respect to device attachment. Page 15, lines 16-17. Moreover, the present application provides that "[t]he Device manager 201 is responsible for brokering devices to services. In doing this, it needs to intercede between the remote device driver 207 and the driver service." Page 18, lines 1-3. For example, in one exemplary embodiment, the device manager may register a device service with the remote device driver in order to allow access to remote devices. See pages 18-20. As a result, the present invention provides device management to control accessibility of devices to services, and thus, to users and user programs. Page 14, lines 13-14.

Goshey does not disclose or suggest a WNASPI32.DLL engine that performs any of these exemplary functions in order to control communication between Windows Application and the target computer's WNASPI32.DLL engine. Accordingly, Goshey does not disclose the device manager of the present invention. In particular, with

respect to Claim 1, Goshey does not disclose or suggest "a device manager for controlling communications between said device service and said remote device driver."

As a result, because Goshey does not disclose each and every limitation of Claim 1, this reference is not the proper basis for a §102(e) rejection. This rejection should therefore be withdrawn.

With respect to Claims 2, 13, 25 and 35, the Examiner admits that Goshey does not disclose or suggest registering a driver service with a remote device. The disclosure of Kennedy is insufficient to teach or suggest this limitation. Kennedy discloses a method for handling a file system write to a media during execution of a software utility for the media wherein the software utility reads at least one file structure from the media and stores the file structure into a local copy of the file structure. Accordingly, Kennedy is directed to ensuring that the file structure or data maintained by a storage media software utility remains in sync with the contents of the storage media. Col. 1, lines 52-55. Therefore, Kennedy does not disclose or even remotely suggest a device management framework wherein a device manager registers a driver service with a remote device driver to allow the driver service to access a remote device over a network.

The specific disclosure of Kennedy cited by the Examiner (Col. 6, lines 1-12) does not teach or suggest registering a driver service with a remote device. Instead, Kennedy is teaching the use of a disk write monitor to trap file system writes in order to ensure that the file structure maintained by the software utility matches that of the media. See Col. 5, line 59-Col. 6, line 53, and Figure 5. As a result, Kennedy does not disclose or suggest registering a driver service with a remote device because Kennedy is not even directed to the same field as the present invention, e.g., managing the access of remote devices over a network. Thus, Kennedy is unable to bridge the gap between Goshey and the present invention and, accordingly, does not render the present invention obvious to one of ordinary skill in the relevant arts.

In particular, with respect to Claim 2, the combination of Goshey and Kennedy

fails to disclose or suggest "a device manager configured to register one or more of said device services with said remote device driver to access one or more of said devices." With respect to Claim 13, the references fail to disclose or suggest "said device manager registering said driver service with a remote device driver." Furthermore, the references fail to disclose or suggest the "register said driver service with a remote device driver" limitation of Claim 25. Similarly, with respect to Claim 35, the cited references also fail to suggest or disclose "a device manager configured to register one or more of said device services with said remote device driver to access one or more of said devices." Moreover, there is no suggestion or motivation to modify either Goshey or Kennedy to overcome the differences between these references and the present invention. The rejections based on these two references should therefore be withdrawn.

Claims 3-12 depend either directly or indirectly on Claim 2. Claims 14-24 depend either directly or indirectly on Claim 13. Claims 26-34 depend either directly or indirectly on Claim 25. The dependent claims should be allowed for at least the reason that they depend on an allowable base claim (i.e., they depend on either Claim 2, 13 or 25).

In view of the foregoing, the Applicant respectfully submits that Claims 1-35 are in condition for allowance. Reconsideration and withdrawal of the rejections is respectfully requested, and a timely Notice of Allowability is solicited. To the extent it would be helpful to placing this application in condition for allowance, the Applicant encourages the Examiner to contact the undersigned counsel and conduct a telephonic interview.

Attached hereto is a marked-up version of the changes made to the claims by the current amendment. The attached page is captioned **"Version with markings to show changes made."**

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While the Applicant believes that no fees are due in connection with the filing of this paper, the Commissioner is authorized to charge any shortage in the fees, including extension of time fees, to Deposit Account No. 50-0639.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'B. Berliner', written over a horizontal line.

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VERSION WITH MARKINGS TO SHOW CHANGES MADE

IN THE CLAIMS:

Claims 1 and 2 have been amended as follows:

1. (Amended) A device manager for providing a device driver for a device comprising:

- a device service for requesting a device;
- a remote bus proxy for communicating with a client device;
- a remote device driver coupled to said [a] client device;
- a device manager for controlling communications between said device service and said remote device driver.

2. (Amended) An apparatus for providing access to one or more remote devices over a network, comprising:

- a remote device driver coupled to one or more devices;
- one or more driver services configured to remotely control one or more of said devices, wherein said remote device driver tracks which of [said] one or more driver services communicates with which of said one or more devices; and
- a device manager configured to register one or more of said device services with said remote device driver to access one or more of said devices.